



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,659	02/05/2002	Densen Cao	5061.6P	9981

7590 02/09/2005

Parsons, Behle & Latimer  
Suite 1800  
201 South Main Street  
P.O. Box 45898  
Salt Lake City, UT 84145-0898

EXAMINER

LEWIS, RALPH A

ART UNIT

PAPER NUMBER

3732

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/072,659	Applicant(s) CAO, DENSEN	
	Examiner Ralph A. Lewis	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☒ This action is FINAL.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 19-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **Terminal Disclaimer Improper**

The terminal disclaimer received 17 may 2004 is improper. Application Serial Numbers 10/072,852, 10/073,672, 10/073,819, 10/073,822, 10/073,823 and 10/076,128 are all misnumbered, as well as, Patent No 6,331,111. Additionally, one of the filing dates is wrong. Accordingly, the obvious-type double patenting rejections remain in the application. Additionally, the obvious-type double patenting rejection based on 10/072,850 is not addressed by the terminal disclaimer.

### **Rejections based on Obvious-type Double Patenting**

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 13-17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-36 of U.S. Patent No. 6,331,111 in view of Mills (WO 99/16136). The patented claims of 6,331,111 set forth all the limitations of the present claims with the exception of those requiring the secondary heat sink to be elongated. Mills, however, teaches that it is desirable to

provide for an elongated secondary heat sink 45, 50, 51, in order to draw heat away from the primary heat sink 48. To elongate the secondary heat sink set forth in the patented claims of 6,331,111 in order to better draw heat away from the primary heat sink as taught by Mills would have been obvious to one of ordinary skill in the art.

Claims 13-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over

claims 1-20 of copending Application No. 10/016,992;  
claims 1-20 of copending Application No. 10/017,272;  
claims 1-20 of copending Application No. 10/017,454;  
claims 1-20 of copending Application No. 10/017,455;  
claims 1-23 of copending Application No. 10/067,692;  
claims 1-17 of copending Application No. 10/071,847;  
claims 1-17 of copending Application No. 10/072,462;  
claims 1-18 of copending Application No. 10/072,613;  
claims 1-19 of copending Application No. 10/072,635;  
claims 1-23 of copending Application No. 10/072,826;  
claims 1-20 of copending Application No. 10/072,852;  
claims 1-17 of copending Application No. 10/072,831;  
claims 1-20 of copending Application No. 10/072,853;  
claims 1-20 of copending Application No. 10/072,859;  
claims 1-20 of copending Application No. 10/073,672;  
claims 1-20 of copending Application No. 10/073,819;  
claims 1-20 of copending Application No. 10/073,822;  
claims 1-19 of copending Application No. 10/073,823; and  
claims 1-20 of copending Application No. 10/076,128.

The limitations of the present claims all appear to broader or slightly different obvious versions of the pending claims in the above identified applications. Merely leaving out limitations (e.g. the "wall outlet power adapter" of claim 1 in 10/016,992) in order to make the claims broader or providing for different groupings of the elements set forth in the claims of the above identified pending applications would have been obvious to the ordinarily skilled artisan.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-17 and 19-21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/072,850. The co-pending claims of '850 include all the limitations of the present claims, including the limitation of sub wells within a major well (see claim 6 of '850). Merely providing for different groupings of the elements set forth in the claims of the '850 co-pending application would have been obvious to the ordinarily skilled artisan.

### **Rejections based on Prior Art**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Art Unit: 3732

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13-16 are rejected under 35 U.S.C. 102(a) as being anticipated by Mills (WO 99/16136).

Mills discloses a dental curing light (page 1, second paragraph) comprised of a hand held wand (Figure 5) having a light module 47, an elongated secondary heat sink 45, 50, 51, having a distal end surface serving as a mounting platform on which primary heat sink 48 is mounted and light emitting semiconductors 43 mounted to the primary heat sink 48. In regard to the cover limitation of claim 13, it is noted that the Mills Led chips 43 are illustrated as coming in a packaged/dome covered window arrangement and that light guide 41 also serves a cover. In regard to the "controls" and "circuitry" limitations of claims 13 and 15, it is an inherent necessity that the Mills device include an on/off switch. In regard to claim 16, the LED's 47 of Mills would inherently have at least some incidental light that is emitted outwardly at an angle – as is illustrated in applicant's Figure 20a.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (WO 99/16136)

Mills does not explicitly appear to state that the disclosed dental photo curing device has an on/off switch . The use, however, of a conventional on/off switch to turn the device on and off when being used would have most certainly been obvious to the ordinarily skilled artisan.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (WO 99/16136) in view of Doiron et al (5,698,866).

In Mills the LEDs are mounted directly on a flat heat sink 48. Doiron et al, however, teach that an improvement over mounting diodes on a flat surface (Figures 9 and 10) is mounting them in a well (Figures 11 and 12) formed on the heat sink so that more light from the LEDs is reflected forward in the desired direction. To have mounted the Mills LEDs in wells as taught by Doiron et al so that more light is reflected forward in the desired direction would have been obvious to one of ordinary skill in the art.

#### **Allowable Subject Matter**

Claims 1-12 and 19-21 would be allowable if rewritten in independent form to include all of the limitations of the claims from which they depend, rewritten to overcome the indefiniteness rejection and a terminal disclaimer filed to overcome the obvious-type double patenting rejections.


**Action Made Final**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication should be directed to **Ralph Lewis** at telephone number **(571) 272-4712**. Fax (703) 872-9306. The examiner works a compressed work schedule and is unavailable every other Friday. The examiner's supervisor, Kevin Shaver, can be reached at (571) 272-4720.

R.Lewis  
February 7, 2005

  
Ralph A. Lewis  
Primary Examiner  
Au3732